October 5 2000

Dear Stakeholder

The Rocky Flats Cleanup Agreement (RFCA) Stakeholder Focus Group will meet at the Broomfield Municipal Center at One DesCombes Drive on October 11 2000 from 4 30 to 6 30 p m A technical discussion meeting will be held in the Bal Swan room at the Broomfield Municipal Center from 3 00 to 4 15 p m The Focus Group meeting will be held in the Bal Swan and Zang s Spur rooms We will continue our discussion of remediation strategies for the 903 pad by addressing the evaluation criteria from the matrix - getting to specifics The agenda for the October 11 meeting is enclosed (Attachment A)

The meeting minutes from the September 27 2000 RFCA Stakeholder Focus Group are enclosed (Attachment B) Also enclosed are the following background materials requested by the Focus Group at the September 27 2000 meeting or identified by the RFCA Parties

Definition of Waters of the State (CDPHE Attachment C)
Analysis of the Focus Group Evaluation Matrix Exercise (Hodgin Attachment D)
Draft Memo Public Process for RSALs (Karpatkin Attachment E)

You are encouraged to attend the technical discussion session for these materials that will occur in the Bal Swan room at the Broomfield Municipal Center from 3 00 to 4 15 p m on September 27 2000 We will have subject matter experts available to answer any questions on the packet information

Also the RFCA agencies will provide information concerning the Radioactive Soil Action Levels (RSALs) review process at the technical meeting

Please come to the October 11 2000 meeting prepared to discuss your views on the evaluation criteria from the evaluation matrix and how they should be applied Please include in your thinking

(Over)

Which evaluation criteria should be objective and measurable (e g Meet Surface Water Quality Standard On site) and which should be more subjective (e g perhaps Community Acceptance)

For objective and measurable criteria which ones should have thresholds or levels that should be protected (the water quality standard is an example) and which ones should involve a relative comparison from alternative to alternative (such as perhaps Reduction of Toxicity Volume and Mobility)

For subjective criteria how should the criteria be addressed so that alternatives can be evaluated (for instance how should Community Acceptance be gauged?)

For all criteria what specific information should be gathered in order to conduct the evaluation who should gather the information and how should it be reviewed

If you need additional information to prepare you for the Focus Group discussion on October 11 please contact the subject matter experts listed in the packet or call Christine Bennett of AlphaTRAC Inc at 303 428 5670 (cbennett@alphatrac com) Christine will help to find the appropriate resource for you

Please visit the RFETS RFCA Stakeholder Focus Group website at www rfets gov and click on **Stakeholder Focus Group** to access background information meeting minutes etc electronically You may call either Christine or me if you have any questions comments or suggestions concerning the RFCA Stakeholder Focus Group or the upcoming meeting

Sincerely

C Reed Hodgin CCM
Facilitator / Process Manager

RFCA Stakeholder Focus Group
Meeting Agenda

When **October 11, 2000, 4 30 - 6 30 p m**

Where **Broomfield Municipal Hall, Bal Swan and Zang's Spur Rooms**

4 30 Introductions and Agenda Review

4 40 Recovery and Revegetation After the Hanford Fire - Mary Harlow

4 50 Presentation and Discussion of Path Forward for RFCA Stakeholder Focus Group - RFCA Agencies

5 05 Report Back from RFCA Agencies on Influence of Focus Group on Decision Making - RFCA Agencies

5 20 Group Discussion of Evaluation Criteria from Matrix - Getting to Specifics - Focus Group

6 10 Topics for Upcoming Meetings

6 20 RSAL Update (DOE EPA CDPHE)

6 30 Adjourn

DEFINITION OF STATE WATERS

COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT
WATER QUALITY CONTROL COMMISSION
REGULATION NO 31
THE BASIC STANDARDS AND
METHODOLOGIES
FOR SURFACE WATER
(5 CCR 1002-31)

STATE WATERS means any and all surface and subsurface waters which are contained in or flow in or through this state but does not include waters in sewage systems waters in treatment works of disposal systems waters in potable water distribution systems and all water withdrawn for use until use and treatment have been completed

PRELIMINARY QUALITATIVE ANALYSIS

BY THE ROCKY FLATS CLEANUP AGREEMENT STAKEHOLDER FOCUS GROUP

OF

ALTERNATIVES FOR REMEDIATION OF THE 903 PAD AREA AT THE ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE

C Reed Hodgin Facilitator
AlphaTRAC Inc

October 5 2000

PRELIMINARY FOR DISCUSSION ONLY

5

INTRODUCTION

This document presents the results of an exercise conducted by the Rocky Flats Cleanup Agreement (RFCA) Stakeholder Focus Group to evaluate example remediation options for the 903 Pad Area at the Rocky Flats Environmental Technology Site (RFETS) The analysis was conducted to identify areas of agreement and disagreement among the members of the Focus Group and between the Focus Group and the RFCA agencies The exercise also served to identify areas in which significant questions must be answered before a remediation approach can be selected The results will be used to identify issues for detailed examination by the Focus Group and to prioritize its discussion topics

The evaluation exercise was conducted at a very early stage in the decision making process when only limited information about evaluation criteria and potential alternatives was available Thus the results are preliminary and for discussion only The results do not represent commitments decisions or final opinions of either the Focus Group members or the participating agencies

The direct products of the exercise - preliminary evaluations of remediation alternatives by RFCA agencies and Focus Group Members - are presented in this report Also provided is a subjective analysis of the implications of the evaluations conducted by the Focus Group facilitator

BACKGROUND

The RFCA has been established to provide a regulatory framework for the cleanup of the RFETS The RFCA represents a regulatorily enforceable commitment among the U S Department of Energy (DOE) the U S Environmental Protection Agency (EPA) and the Colorado Department of Public Health and Environment (CDPHE)

The RFCA Stakeholder Focus Group was formed by the three RFCA agencies to provide early and continuing input to the cleanup decision making process by interested members of the community surrounding RFETS

The purpose of the RFCA Stakeholder Focus Group is for the RFCA parties to work collaboratively with the community to discuss the wide range of environmental cleanup actions and decisions needed to safely close Rocky Flats The Focus Group addresses issues holistically exploring the implications and interrelationships among issues provides a focal point for in depth discussion of specific decision documents and provides a forum for communication and information sharing between and among the agencies and the public

The RFCA Stakeholder Focus Group is not a decision making body - no votes are taken and consensus is not an objective Rather the Focus Group serves as a forum to bring issues before the community early in the process of options evaluation and decision formulation This allows the community to participate directly in the policy forming dialog with the RFCA parties Public input to cleanup decisions will thus contribute to and help formulate these decisions throughout the process rather than in the tradition of review and comment after decisions are drafted

The Stakeholder Focus Group is intended to principally involve members of the interested public that are technically knowledgeable and prepared to devote substantial time to this process The Stakeholder Focus Group is not intended as a mechanism to reach out to the broad public or solicit broad public input on these issues The RFCA Parties will use other existing or new mechanisms to achieve this broader public input on RFCA decisions

EVALUATION OF REMEDIATION STRATEGIES FOR THE 903 PAD AREA

The evaluation exercise conducted by the Focus Group was part of a discussion aimed at helping the RFCA parties choose the right strategy for cleaning up the 903 Pad area Two key issues associated with this strategy are water quality protection approaches to meet the Surface Water Quality Standard and risk reduction the Radioactive Soil Action Levels (RSALs) Seven overall steps were in the Focus Group process for crafting the strategy (Figure 1) To this point in their discussion the Focus Group had defined the problem to be remediated (Plutonium and Americium contamination in the 903 Pad area) They had also worked to understand the implications of the problem (increased health risk from radiation dose and impacts on surface water quality) The Focus Group had also worked with the RFCA agencies to define the objectives of remediation (maintain health risk at acceptable levels and meet the surface water standard onsite and offsite) The evaluation exercise was part of the Focus Group activity to identify alternatives define strategies and to evaluate those strategies

THE EVALUATION EXERCISE

DOE initiated the exercise at the September 13 2000 Focus Group Meeting by presenting to the group the idea of an evaluation matrix for use in qualitative evaluation of cleanup alternatives for the 903 Pad area Evaluation criteria were listed as columns in the matrix and were extensions of the nine remedy evaluation criteria specified in the Comprehensive Environmental Restoration Cleanup and Liability Act (CERCLA) Alternative cleanup strategies were listed as rows in the matrix DOE

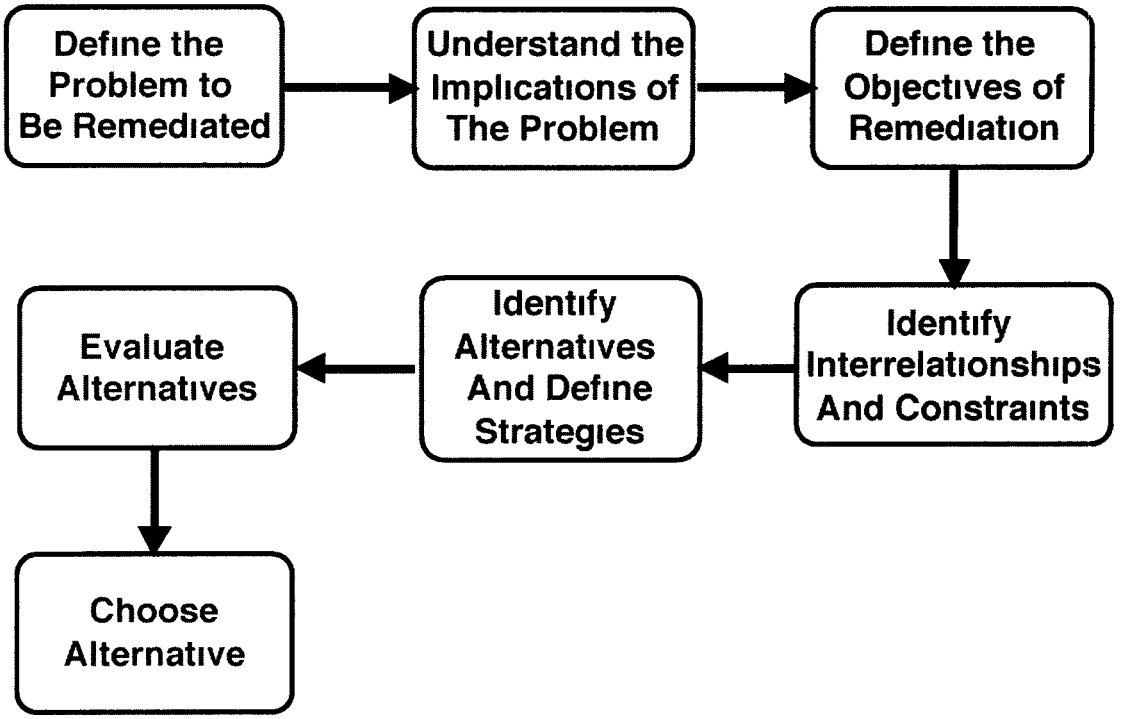

Figure 1 The Process Followed by the Focus Group in Evaluating Cleanup Strategies for the 903 Pad Area

presented four bounding cleanup alternatives as examples in its analysis Each box in the matrix was filled with an arrow to qualitatively indicate the expected success for each alternative to satisfy each evaluation criterion

Following DOE s presentation the members of the Focus Group conducted a homework activity to identify additional alternatives for discussion, determine additional evaluation criteria to apply to the alternatives and to conduct their own initial qualitative evaluation of the alternatives

RESULTS OF THE EVALUATION EXERCISE

The Focus Group met to combine its results at its September 27 2000 meeting There were some reservations about combining and presenting the results of the members analyses Members expressed concern that their answers would represent commitments and that the answers would be used out of context at later times The representatives of the RFCA agencies emphasized that the inputs to this exercise would be considered preliminary for discussion only and would not be used out of context or construed as commitments from the members They further stated that the agencies evaluations were also preliminary for discussion only and also did not represent commitments Some members also expressed concern that the exercise was

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Alternative Remediation Strategy
Soil Excavation and Removal to 10 pCi/g Only

	Threshold Criteria										Balancing Criteria						Modifying Criteria		Non CERCLA Criteria		
	Protect Human Health and Environment	Protect Local Off site Residents	Protect Future On site Land User	Protect Site Workers	Protect Transportation Workers and Public	Protect Disposal Site Workers	Meet Surface Water Quality Standard On site	Meet Surface Water Quality Standard Off site	Protect Environment	Comply with ARARs (including Endangered Species Act)	Longterm Effectiveness	Reduction of Toxicity Volume Mobility	Shortterm Effectiveness	Implementability	Capital Cost (Remediation)	Operation and Maintenance Cost (Stewardship)	State Acceptance	Community Acceptance	Stewardship	Secondary Benefits	Technology Development
DOE		↑↑	↑↑	↓→	↓→	↓→	↑	↑	→	→	→	NA	↓	↑	↓	↓	?	↑	→	↓	↓
CDPHE	↓	↓	↑	→	→	→	↓	↓	→	→	↓	↑	↑	↑	→	↑	→		→	→	
EPA	→	→	↑	→	↑	↑	→	→	→	→	→	↑	↑	↑	→	↑					
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Legend					
	↑	Alternative probably WILL meet criterion	→	Not enough information yet to evaluate success	Left Arrow Short Term Evaluation
	↓	Alternative probably WILL NOT meet criterion	?	Need key information to have discussion	Right Arrow Long Term Evaluation

RFCA Stakeholder Focus Group

PRELIMINARY FOR DISCUSSION ONLY

REV 0 9/27/00

Alternative Remediation Strategy
Soil Excavation and Removal to 10 pCi / g Plus Engineered Barriers Except No Dam at Indiana St

	Threshold Criteria										Balancing Criteria						Modifying Criteria		Non CERCLA Criteria		
	Protect Human Health and Environment	Protect Local Off site Residents	Protect Future On site Land User	Protect Site Workers	Protect Transportation Workers and Public	Protect Disposal Site Workers	Meet Surface Water Quality Standard On site	Meet Surface Water Quality Standard Off site	Protect Environment	Comply with ARARs (including Endangered Species Act)	Longterm Effectiveness	Reduction of Toxicity Volume Mobility	Shortterm Effectiveness	Implementability	Capital Cost (Remediation)	Operation and Maintenance Cost (Stewardship)	State Acceptance	Community Acceptance	Stewardship	Secondary Benefits	Technology Development
DOE																					
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Legend					
	↑	Alternative probably WILL meet criterion	→	Not enough information yet to evaluate success	Left Arrow Short Term Evaluation
	↓	Alternative probably WILL NOT meet criterion	?	Need key information to have discussion	Right Arrow Long Term Evaluation

RFCA Stakeholder Focus Group

PRELIMINARY FOR DISCUSSION ONLY

REV 0 9/27/00

Alternative Remediation Strategy
Soil Excavation and Removal to RSAL (Tier I) Plus Engineered Barriers Except No Dam at Indiana St

	Threshold Criteria										Balancing Criteria						Modifying Criteria		Non CERCLA Criteria		
	Protect Human Health and Environment	Protect Local Off site Residents	Protect Future On site Land User	Protect Site Workers	Protect Transportation Workers and Public	Protect Disposal Site Workers	Meet Surface Water Quality Standard On site	Meet Surface Water Quality Standard Off site	Protect Environment	Comply with ARARs (Including Endangered Species Act)	Longterm Effectiveness	Reduction of Toxicity Volume Mobility	Shortterm Effectiveness	Implementability	Capital Cost (Remediation)	Operation and Maintenance Cost (Stewardship)	State Acceptance	Community Acceptance	Stewardship	Secondary Benefits	Technology Development
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RFCA Stakeholder Focus Group

PRELIMINARY FOR DISCUSSION ONLY

REV 0 9/27/00

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Alternative Remediation Strategy
Soil Excavation and Removal to RSAL (Tier 1) Plus Engineered Barriers

	Threshold Criteria										Balancing Criteria						Modifying Criteria		Non CERCLA Criteria		
	Protect Human Health and Environment	Protect Local Off site Residents	Protect Future On site Land User	Protect Site Workers	Protect Transportation Workers and Public	Protect Disposal Site Workers	Meet Surface Water Quality Standard On site	Meet Surface Water Quality Standard Off site	Protect Environment	Comply with ARARs (including Endangered Species Act)	Longterm Effectiveness	Reduction of Toxicity Volume Mobility	Shortterm Effectiveness	Implementability	Capital Cost (Remediation)	Operation and Maintenance Cost (Stewardship)	State Acceptance	Community Acceptance	Stewardship	Secondary Benefits	Technology Development
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→	33	11	32	21	1	0	3	23	45	22	2	33	2	1	3	3	3	21	23	1	1
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	↓	Alternative probably WILL NOT meet criterion	?	Need key information to have discussion	Right Arrow Long Term Evaluation

RFCA Stakeholder Focus Group

PRELIMINARY FOR DISCUSSION ONLY

REV 0 9/27/00

Alternative Remediation Strategy
Soil Excavation and Removal to RSAL (Tier I) Only

	Threshold Criteria										Balancing Criteria						Modifying Criteria		Non CERCLA Criteria		
	Protect Human Health and Environment	Protect Local Off site Residents	Protect Future On site Land User	Protect Site Workers	Protect Transportation Workers and Public	Protect Disposal Site Workers	Meet Surface Water Quality Standard On site	Meet Surface Water Quality Standard Off site	Protect Environment	Comply with ARARs (Including Endangered Species Act)	Longterm Effectiveness	Reduction of Toxicity Volume Mobility	Shortterm Effectiveness	Implementability	Capital Cost (Remediation)	Operation and Maintenance Cost (Stewardship)	State Acceptance	Community Acceptance	Stewardship	Secondary Benefits	Technology Development
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CDPHE	↓	↑	↑	→	→	→	↓	↓	→	→	↓	↑	↑	↑	→	↑	→		→	→	
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RFCA Stakeholder Focus Group

PRELIMINARY FOR DISCUSSION ONLY

REV 0 9/27/00

Alternative Remediation Strategy
Soil Excavation and Removal to 10 pCi/g Plus Engineered Barriers Plus Nearby or On site Retrievable Monitored Storage (NORMS)

	Threshold Criteria										Balancing Criteria						Modifying Criteria		Non CERCLA Criteria		
	Protect Human Health and Environment	Protect Local Off site Residents	Protect Future On site Land User	Protect Site Workers	Protect Transportation Workers and Public	Protect Disposal Site Workers	Meet Surface Water Quality Standard On site	Meet Surface Water Quality Standard Off site	Protect Environment	Comply with ARARs (including Endangered Species Act)	Longterm Effectiveness	Reduction of Toxicity Volume Mobility	Shortterm Effectiveness	Implementability	Capital Cost (Remediation)	Operation and Maintenance Cost (Stewardship)	State Acceptance	Community Acceptance	Stewardship	Secondary Benefits	Technology Development
DOE																					
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RFCA Stakeholder Focus Group

PRELIMINARY FOR DISCUSSION ONLY

REV 0 9/27/00

Alternative Remediation Strategy
Ultimate Goal of Long term Stewardship Technological Development for Cleanup to Average Background Levels

	Threshold Criteria										Balancing Criteria						Modifying Criteria		Non CERCLA Criteria		
	Protect Human Health and Environment	Protect Local Off site Residents	Protect Future On site Land User	Protect Site Workers	Protect Transportation Workers and Public	Protect Disposal Site Workers	Meet Surface Water Quality Standard On site	Meet Surface Water Quality Standard Off site	Protect Environment	Comply with ARARs (including Endangered Species Act)	Longterm Effectiveness	Reduction of Toxicity Volume Mobility	Shortterm Effectiveness	Implementability	Capital Cost (Remediation)	Operation and Maintenance Cost (Stewardship)	State Acceptance	Community Acceptance	Stewardship	Secondary Benefits	Technology Development
DOE																					
CDPHE	↑	↑	↑	→	→	→	↑	↑	↑	→	↑	↑	↑	→	→	→	→	→	→	→	↑
EPA																					
COMMUNITY																					
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RFCA Stakeholder Focus Group

PRELIMINARY FOR DISCUSSION ONLY

REV 0 9/27/00

Surface Water Standards at Other States with DOE Facilities

Idaho

Idaho Department of Environmental Quality requirements which by statute cannot be more stringent than any federal standards
1) General Surface Water Quality Criteria
IDAPA 58 01 02 200 04 Radioactive materials or radioactivity shall not exceed the values listed in CFR 10 Part 20 Chapter 1 App B Table 2 Effluent concentrations Column 2

Am 241	2E 8 uCi/ml	(20 pCi/L)
Pu 238 239 240	2E 8 uCi/ml	(20 pCi/L)
U 233 234 235 238	3E 7 uCi/ml	(300 pCi/L)

2) Surface Water Quality Criteria for Water Supply Use Designation
IDAPA 58 01 02 252 01 a Radioactive materials or radioactivity not to exceed concentrations specified in Idaho Department of Environmental Quality Rules IDAPA 58 01 08 Rules Governing Public Drinking Water Systems This rule references 40 CFR Part 141 15 and 16 (MCLs)

[no radionuclides of interest at RFETS have established MCLs]

DOE Idaho has the following surface water alert levels from DOE Order 5400 5 These Alert Levels are 25% of the Derived Concentration Guide (DCGs) for specific nuclides

Am 241	8E 9 uCi/ml	(8 pCi/L)
Pu 238	2E 7 uCi/ml	(200 pCi/L)
Pu 239/240	8E 9 uCi/ml	(8 pCi/L)
Total U	2E 7 uCi/ml	(200 pCi/L)

Nevada

Nevada has no surface water standards for radionuclides

Ohio

Ohio does not have any state wide standards for radionuclides since the primary sites of interest were never regulated under NPDES permits because of the AEA exclusion Cleanup numbers for surface water have been established at Fernald though These are the standards the site must reach when remediation is complete They are based on human risk to exposure at an intermittent stream in an undeveloped park scenario

Pu 238	210 pCi/L
Pu 239	200 pCi/L
Ra 226 + D	38 p Ci/L
Ra 228 + D	47 pCi/L
U	530 mg/L

Tennessee

The Tennessee Water Quality Control Act of 1977 (amended 1987) does not have quantitative surface water quality standards for radionuclides That Act does have language to the effect that it is unlawful to cause the alteration of physical chemical radiological biological or bacteriological properties of any waters of the state without a valid permit There is also some generic toxicity language that could be applicable to radionuclide contamination of surface waters The only language that affects soil cleanup is for waters of the State that do not meet the identified usage (i e irrigation agricultural recreational et) due to non point source or run off of radionuclides

Washington

No surface water standards for radionuclides are applied in Washington The State of Washington Department of Health has drinking water quality standards for radionuclides which are based on Maximum Contaminant Levels (MCLs) These are applied at the 29 facilities licensed by the state which do not include DOE facilities

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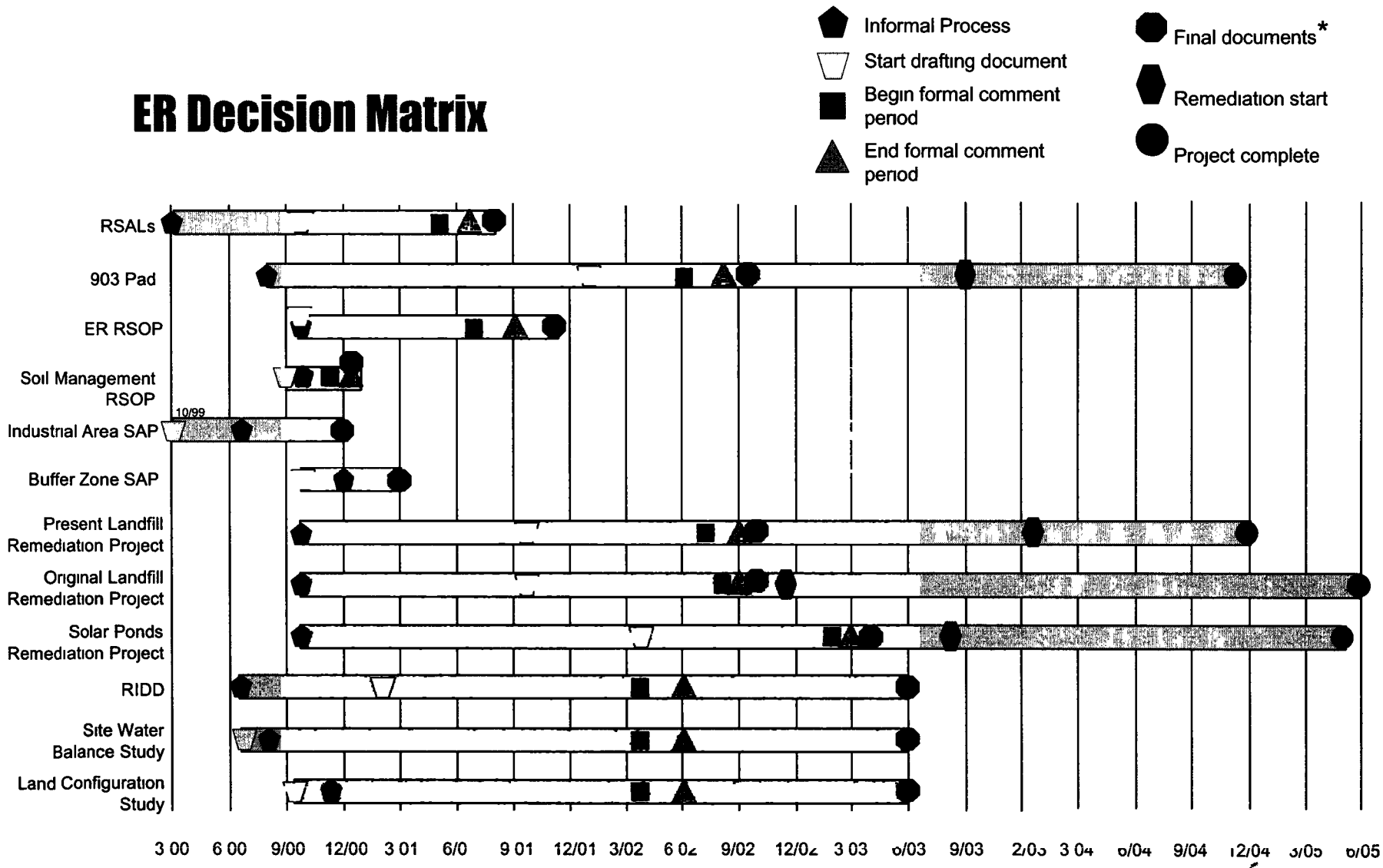
ER Decision Matrix



* Final documents are the final issuance of the relevant decision documents under the RFCA process All of these actions are interim cleanup actions reviewable at the final Record of Decision

CR 00116 jc 1

CLOSURE 2006
ROCKY FLATS CLOSURE PROJECT
KAISER-HILL

ER Decision Matrix

DRAFT

poc John Corsi (303) 966 6526

RSALs

Action levels are numeric levels that when exceeded trigger an evaluation remedial action and/or management action Action levels apply to soil surface water and ground water Action levels do not determine what specific action is appropriate Specific remedial and/or management actions will be decided through a process prescribed by the Rocky Flats Cleanup Agreement (RFCA) and environmental laws that apply to soil cleanup projects

Schedule*

Informal Process	Start Drafting Document	Begin Formal Comment Period	End Comment Period	Final Document	Remediation Start	Project Complete
3/00	10/00	5/01	7/01	8/01	NA	NA

This schedule reflects this year s annual review of RSALs as required by RFCA This review is of greater depth and scope than past reviews in part to incorporate the work of the RSAL OP and to ensure that these RSALs are used for the remediation of the 903 pad RFCA requires annual reviews each year until site closure and through the five year CERCLA review process as well

Key questions/Issues to be resolved

- **What RSAL is protective of human health and environment?**
- **Should an anticipated future land use beyond the land uses described in RFCA be evaluated?**
- **What regulatory framework should be used (What is the ARAR? What model to use?)**
- **Whether and how a catastrophic events (e g fire drought) should/could be considered?**
- **What is the value or distribution for key parameters for RSAL calculations (e g air resuspension)**

903 Pad

The 903 Pad Closure Project includes the 903 Pad Drum Storage Area (903 Pad) the 903 Lip Area and the Americium Zone where soils have been impacted from the outdoor storage of 5 237 drums A decision document will be prepared to identify appropriate cleanup levels protective of human health of future land users and to meet surface water standards on and off Site

Schedule*

Informal Process	Start Drafting Document	Begin Formal Comment Period	End Comment Period	Final Document	Remediation Start	Project Complete
8/00	1/02	6/02	8/02	9/02	9/03	11/04

Key questions/Issues to be resolved

- **Will source removal to the selected RSAL alone achieve protection of surface water quality?**
- **Will additional source removal beyond the RSAL achieve protection of surface water quality?**
- **If source removal alone cannot achieve surface water quality what engineered barriers will help achieve protection of surface water quality?**
- **How do we balance protection of future land users workers surface water quality and ecosystems in the short and long term?**
- **How will long term stewardship issues influence remedy selection?**

**Th tim tabl fl t th ch d l f d lop g th t m d d cum t u d RFCA All f th d ns ew bl at th f al Reco d of D n*

ER RSOP

This RSOP is the decision document for routine soil and groundwater remediation at RFETS It will address remediation of soil and associated debris at all Individual Hazardous Substance Sites (IHSSs) Potential Areas of Concern (PACs) and Under Building Contamination (UBC) documented via the Historical Release Report process of RFCA as well as the remedial decision for subsurface contaminant plumes This RSOP does not address non routine actions such as closure of the Present Landfill Original Landfill Solar Evaporation Ponds final Site configuration or the design for groundwater remediation systems The regulators approve the RSOP only once Initial approval of an RSOP will be accomplished through the IM/IRA process (RFCA ¶25(bo))

Schedule*

Informal P s	Start Drafting D ument	Begin Formal Comment Period	End Comment Period	Final Document	Remediation Start	Project Complete
10/00	10/00	7/01	9/01	11/01	NA	NA

Key questions/Issues to be resolved

- **What are the appropriate cleanup levels? (ARARs?)**
- **Will deep subsurface soil contamination require removal if there is no exposure pathway?**
- **What are the remedial action objectives for surface soil subsurface soil and groundwater?**

Soil Management RSOP

The management and disposition of remediation soil investigation derived material excavated soil and sediment at the Rocky Flats has been conducted under various regulatory authorities This has lead to inefficiencies and differences in handling management and disposition of soil The purpose of this RSOP is to streamline the characterization management and disposition of all disturbed soil at RFETS into a single process designed to protect public health and the environment regardless of why it was disturbed or excavated

Schedule*

Info mal Process	Start D afting Document	Beg n Fo mal Comment Period	End Comment Per od	F nal Document	Remediation Start	Project Complete
10/00	9/00	11/00	1/01	1/01	NA	NA

Key questions/Issues to be resolved

- **How do RSALs apply to soil disturbance projects around the Site?**
- **Should the put back level approach in RFCA Attachment 5 ALF be applied to all disturbed soil on site?**
- **Can soils from characterization and construction activities be returned to the point of origin and be remediated and dispositioned appropriately with the IHSS from which it was generated?**

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Industrial Area Sampling Analysis Plan (IA SAP)

SAPs are required to support pre remedial characterization waste volume calculations waste characterization confirmation of cleanup and the Comprehensive Risk Assessment The IA SAP describes the surface and subsurface soil sampling to support these objectives in the IA Operable Unit

Schedule*

Informal Process	Start Drafting Document	Begin Formal Comment Period	End Comment Period	Final Document	Remediation Start	Project Complete
7/00	10/99	NA	NA	12/00	NA	NA

Key questions/Issues to be resolved

- **What sampling methodology and approach should be used for the industrial area?**
- **How many samples are sufficient for preremedial characterization and post remedial confirmation?**
- **How many samples are necessary to support the Comprehensive Risk Assessment (CRA) and delisting from the NPL?**

Buffer Zone Sampling Analysis Plan (BZ SAP)

SAPs are required to support pre remedial characterization waste volume calculations waste characterization verification of cleanup and the Comprehensive Risk Assessment The BZSAP describes the surface and subsurface soil sampling to support these objectives in the Buffer Zone

Schedule*

Informal Process	Start Drafting Document	Begin Formal Comment Period	End Comment Period	Final Document	Remediation Start	Project Complete
12/0	10/00	NA	NA	3/01	NA	NA

Key questions/Issues to be resolved

- **What sampling methodology and approach should be used for the buffer zone?**
- **How many samples are sufficient for preremedial characterization and post remedial confirmation?**
- **How many samples are necessary to support the comprehensive Risk Assessment (CRA) and delisting from the NPL?**

**These t metables reflect the schedule fo developi g th te m dec s on documents unde RFCA All of these dec s ons are reviewable at the f al R d f D*

Present Landfill Remediation Project

The Present Landfill encompasses approximately thirty acres in the northwest Buffer Zone area and contains six additional IHSSs and PACs within its boundary The six additional IHSSs and PACs have been proposed as no further action The Present Landfill was operated from 1968 through 1998 and is identified as an interim status unit under RCRA The landfill received hazardous waste in the past and is required to be closed under the provisions of RFCA Attachment 10 The presumed remedial action for the Present Landfill is closure by an engineered cap Post closure monitoring and cap maintenance will be required

Schedule*

Informal P ocess	Start Drafting Document	Begin Formal Comment Period	End Comment Period	Final Document	Remediation Start	Project Complete
10/00	10/01	7/02	9/02	10/02	1/04	12/04

Key questions/Issues to be resolved

- **Is the presumptive remedy of using a cover or cap appropriate?**
- **If a cap is appropriate what type of cap should be used (e g RCRA cap evapotranspiration cap)**
- **If cap is not appropriate what other remedy is protective?**

Original Landfill Remediation Project

The Original Landfill encompasses approximately 20 acres in the southwest Buffer Zone area and contains an additional IHSS The landfill operated from 1952 to 1968 and received approximately 2 million cubic feet of general plant wastes including solvents paints and pesticides Records indicate that the landfill also received quantities of depleted uranium The Original Landfill is not a RCRA unit Remedial options include closure by a cap cover or excavation

Schedule*

Informal Process	Start Draft ng Document	Begin Formal Comment Period	End Comment Per od	Final Document	Remediation Start	Project Complete
10/00	10/01	8/02	9/02	10/02	11/02	6/05

Key questions/Issues to be resolved

- **What is the appropriate remedy to protect human health and meet the surface water standards consistent with RFCA and CERCLA?**
- **If a cap is appropriate what type of cap should be used (e g RCRA cap evapotranspiration cap)?**
- **If cap is not appropriate what other remedy is protective?**

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Solar Ponds Remediation Project

The Solar Evaporation Ponds (SEP) encompass approximately 12 acres in the northeastern quadrant of the Industrial Area constructed and operated from 1953 to 1986 The ponds received low level radioactive wastes contaminated with high levels of nitrate The SEP is identified as a RCRA interim status unit and is required to be closed under the provisions of RFCA Attachment 10 The RFCA presumed remedial action for the SEP is closure by an engineered cap Post closure monitoring and cap maintenance will be required

Schedule*

Informal Process	Start Drafting Document	Begin Formal Comment Period	End Comment Period	Final Document	Remediation Start	Project Complete
10/00	4/02	2/03	3/03	4/03	8/03	5/05

Key questions/Issues to be resolved

- **Is the presumptive remedy of using a cover or cap appropriate?**
- **If a cap is appropriate what type of cap should be used (e g RCRA cap evapotranspiration cap)?**
- **If cap is not appropriate what other remedy is protective?**

RFCA Integrating Decision Document (RIDD)

The RIDD is a RFCA decision document that integrates necessary response (accelerated) actions and other critical closure issues and decisions to achieve the final site condition in one document The RIDD provides the framework strategy and decisions necessary to complete the Site remediation under RFCA and support the final CAD/ROD The contract currently calls for an Interim Final ROD It is assumed that the RIDD will replace the IROD as a contract requirement

Schedule*

Informal Process	Start Drafting Document	Begin Formal Comment Period	End Comment Period	Final Document	Remediation Start	Project Complete
8/00	2/01	4/02	6/02	6/03	NA	NA

Key questions/Issues to be resolved

- **What is the appropriate water standard?**
- **What is the water quality strategy? For example**
  - ✓ **Will ponds be retained?**
  - ✓ **Will dams be used as part of final Site Configuration etc ?**
- **How and where should on site water quality be measured?**
- **What is the groundwater remediation strategy?**
- **Can No Further Action Sites previously accepted by the regulators be closed? If not what additional remedial actions are required?**

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Site Water Balance Study

The scope of the site wide water balance activity is to develop a hydrologic design basis for RFETS closure activities The objectives of the project are to

1 Evaluate how the site wide water hydrology is likely to change from the present to final Site configuration at closure
2 Assist in predicting surface water impacts from groundwater for present and final Site configuration
3 Provide hydrologic profiles to support decisions for final Industrial Area configuration to protect surface water quality standards
4 Assist in determining the final configuration of the Walnut Creek and Woman Creek drainages to protect surface water quality standards and address ecological concerns and
5 Provide information for the RFCA Integrating Decision Document the Comprehensive Risk Assessment and the Final CAD/ROD

Schedule*

Info mal Process	Start Drafting Document	Begin Formal Comment Period	End Comment Period	Final Document	Remediation Start	Project Complete
8/00	7/00	4/02	6/02	6/03	NA	NA

Key questions/Issues to be resolved

- **What will the water flux (hydrologic regime and characteristics) be at Site Closure?**
- **What is the impact eliminating the importation of water for Site use?**

Land Configuration Study

The Land Configuration Design Basis will provide the engineering information required to design the final land configuration of RFETS following completion of all remedial actions The final land configuration will be engineered to protect public health and the environment consistent with future land use The design basis incorporates all appropriate physical chemical and biological information including site wide water balance soil erosion and sediment transport modeling and actinide migration The design basis includes a conceptual final land configuration that addresses the Industrial Area the inner Buffer Zone and the Woman and Walnut Creek drainages Results will be used in the CRA and CAD/ROD

Schedule*

Informal Process	Start Drafting Document	Begin Formal Comment Period	End Comment Period	Final Document	Remediation Start	Project Compl te
11/00	10/00	4/02	6/02	6/03	NA	NA

Key questions/Issues to be resolved

- **What land configuration will lead to a naturally functioning low maintenance environmentally protective geomorphic system?**
- **What are the potential impacts of long term erosion? What can we do to minimize any erosion impacts?**
- **What will the final configuration of drainages be?**
- **Will dams be part of the final site configuration?**
- **Will the ponds be retained as part of final site configuration?**
- **What enhancements should be made to any engineered controls?**